

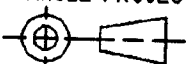
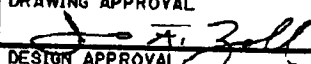

DRAWING SIZE A

APPLICATION		REVISIONS		
NEXT ASSY	USED ON	LTR	DESCRIPTION	DATE(YR-MO-DA) APPROVED
		-	PRODUCT BASELINE ERR: R7K2026	97-05-15 KN
		A	NOR R7K2055 971121	980313 JB
		B	NOR R9K2028 990609	990730 TPT
		C	NOR R9K2023 990528	991115 RLV
		D	NOR R0K2020/000607	000825 HJS
		E	NOR R1K3002 010816	010925 RLV
		F	NOR R1K3007/020313	020401 HJS
		G	NOR R3K3016/030303	030501 BAC
		H	NOR R04K3003/040624	040730 FET

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DO NOT SCALE DRAWING		DESIGN ACTIVITY U.S. ARMY ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER PICATINNY ARSENAL, NEW JERSEY 07808-5000	
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON DECIMAL FRACTION 2 PL ± ± 3 PL ± ±		DRAWN BY K. NAGY	DATE(YR-MO-DA) 97-05-16
THIRD ANGLE PROJECTION 		CHECKER	ENGINEER
MATL ENGR		DRAWING APPROVAL 	
		DESIGN APPROVAL 	
		SIZE A	CAGE CODE 12982865
		SCALE	UNIT WT. SHEET 1 OF 9

MINIMUM MARKING INSTRUCTIONS FOR AMMUNITION AND EXPLOSIVE CONTAINERS

GENERAL NOTES

1. MARKING SHALL BE APPLIED BY STAMPING OR STENCILING. HAND LETTERING OR LABELING OF EXTERIOR CONTAINERS IS NOT AUTHORIZED FOR AMMUNITION SHIPMENTS.
2. MARKING SHALL BE 1/4 INCH IN HEIGHT MINIMUM AND 1 INCH IN HEIGHT MAXIMUM. THE SIZE OF LETTERING SELECTED SHALL BE THE LARGEST SIZE PRACTICAL FOR THE PACKAGE SIZE WITHIN THE ACCEPTABLE RANGE. LETTERING FOR POP MARKING SHALL BE 1/2 INCH MINIMUM FOR BOXES OVER 66 POUNDS. BOXES LESS THAN 66 POUNDS SHOULD UTILIZE 1/2 INCH MARKING IF AT ALL POSSIBLE, HOWEVER REDUCTION IN SIZE TO .25 INCH MINIMUM IS ALLOWED IF INSUFFICIENT SURFACE AREA IS AVAILABLE.
3. FIGURE 1, SHOWING A CORRECTLY MARKED BOX, AND FIGURE 2, SHOWING A CORRECTLY MARKED CYLINDRICAL CONTAINER, SHALL BE USED AS A GUIDE TO INTERPRETING MINIMUM MARKING REQUIREMENTS.
4. PUNCTUATION MARKS (E.G. COMMAS(,), PERIODS (.), DASHES(-)) SHALL NOT BE MARKED ON THE PACKAGE UNLESS SPECIFICALLY INSTRUCTED.
5. IF DETAILED MARKING INSTRUCTIONS PROVIDED IN THE CONTRACT OR PURCHASE ORDER CONFLICT WITH THE INSTRUCTIONS ON THIS DRAWING, THEY SHALL TAKE PRECEDENCE OVER THE INSTRUCTIONS CONTAINED ON THIS DRAWING.
6. COLOR OF MARKINGS. UNLESS INSTRUCTED OTHERWISE IN THE CONTRACT OR PURCHASE ORDER:
 - A. PACKAGINGS OF NATURAL WOOD OR OTHER LIGHT COLORATION SHALL BE MARKED WITH BLACK MARKINGS.
 - B. PACKAGINGS OF GREEN OR BLACK SHALL BE MARKED USING WHITE OR YELLOW MARKINGS.

SPECIFIC NOTES:

MARKING ON UNIT PACKS AND INTERMEDIATE PACKS (SEE FIGURE 1)

1. THE FOLLOWING IDENTIFICATION MARKINGS SHALL BE PLACED ON UNIT PACKS, INTERMEDIATE CONTAINERS, AND UNPACKED ITEMS. WORDS SUCH AS "NSN/NATO STOCK NUMBER", "ITEM DESCRIPTION", AND "QUANTITY" SHALL NOT BE INCLUDED AS PART OF THE IDENTIFICATION MARKINGS. MARKINGS SHALL BE LOCATED ON ONE LONG SIDE OF THE BOX WITH NSN/NATO STOCK NUMBER OCCUPYING THE FIRST LINE. IF AN INNER PACK CONSISTS OF A BOX OR BOXES WITHIN A BARRIER BAG, BOTH THE BOXES AND BAG SHALL BE MARKED UNLESS THE BAG IS TRANSPARENT.

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A. NSN/NATO STOCK NUMBER. (WHEN NO NSN/NATO STOCK NUMBER IS AVAILABLE, A MANAGEMENT CONTROL NUMBER OR PART NUMBER/MANUFACTURER (PN/MFR) SHALL BE USED)

B. DODIC/NALC. (THE DODIC/NALC SHALL BE PLACED ON THE SAME LINE AS THE NSN/NATO STOCK NUMBER.

C. QUANTITY (UI). (THE UNIT OF ISSUE (UI) IS ONLY MARKED WHEN IT IS OTHER THAN EACH (E.G. LB, FT, ETC.). THE QUANTITY ALWAYS PRECEDES THE ITEM DESCRIPTION ON THE SAME LINE THAT DESCRIPTION MARKING BEGINS)

D. ITEM DESCRIPTION (ITEM DESCRIPTION MAY BE MARKED ON MORE THAN ONE LINE IF REQUIRED DUE TO SPACE LIMITATIONS. STANDARD ABBREVIATIONS, ALTHOUGH NOT DESIRED, MAY BE USED IF MARKING LENGTH IS EXCESSIVE)

E. LOT NUMBER AND SERIAL NUMBER (WHEN SERIAL NUMBER IS ASSIGNED). (THE LOT NUMBER AND SERIAL NUMBER WILL BE MARKED ON THE BOX. THE WORD "LOT" SHALL PRECEDE THE LOT NUMBER AND "SER" SHALL PRECEDE THE SERIAL NUMBER).

EXTERIOR CONTAINER MARKINGS (SEE FIGURES 1 AND 2)

1. EXTERIOR CONTAINERS SHALL BE MARKED WITH ALL INFORMATION THAT IS MARKED ON THE INNER CONTAINER AND THE FOLLOWING ADDITIONAL MARKING. EXCEPT AS NOTED BELOW, ALL MARKINGS SHALL BE PLACED ON A LONG SIDE OF THE BOX IF RECTANGULAR OR ALONG THE LONG AXIS IF CYLINDRICAL. FOR BOXES THAT ARE HINGED, THE SIDE OPPOSITE THE HINGES (HASP SIDE) SHALL BE MARKED WITH NSN/ITEM DESCRIPTION, ETC.

A. GROSS WEIGHT. THE CAPITAL LETTERS "WT" SHALL PRECEDE THE NUMERICAL GROSS WEIGHT IN POUNDS. FRACTIONAL WEIGHTS SHALL BE ROUNDED UP TO THE NEXT WHOLE POUND. THE NUMERICAL WEIGHT SHALL BE FOLLOWED WITH THE ABBREVIATION FOR POUNDS "LBS" IN CAPITAL LETTERS.

B. PROPER SHIPPING NAME (PSN) AND UNITED NATIONS (UN) IDENTIFICATION NUMBER (OR NORTH AMERICAN (NA) NUMBER). THE PSN, UN NUMBER (OR NA NUMBER) SHALL BE MARKED ON THE TOP OF THE PACKAGE FOR RECTANGULAR CONTAINERS IN A CLEAR AREA AWAY FROM ANY OTHER BOX MARKINGS. FOR CYLINDRICAL CONTAINERS, THE PSN/UN NUMBER SHALL BE MARKED LENGTHWISE ON THE CONTAINER SEPARATED FROM ALL OTHER MARKINGS AS SHOWN IN FIGURE 2. THE PROPER PSN/UN NUMBER SHALL BE AS SHOWN IN THE JOINT HAZARD CLASSIFICATION SYSTEM (JHCS) FOR THE SPECIFIC NSN BEING PACKAGED OR AS ASSIGNED BY A PROPER CLASSIFICATION AUTHORITY.

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C. PERFORMANCE ORIENTED PACKAGING (POP) CERTIFICATION
MARK. THE APPROPRIATE PERFORMANCE ORIENTED PACKAGING

(POP) SYMBOL AS SPECIFIED BY THE COGNIZANT DESIGN ACTIVITY IN THE CONTRACT OR ON THE DRAWING SHALL BE MARKED ON THE SIDE OF THE CONTAINER THAT IS OPPOSITE TO THE IDENTIFICATION-MARKED SIDE FOR BOTH RECTANGULAR AND CYLINDRICAL CONTAINERS. IF THE EXTERIOR CONTAINER IS AN OVERPACK CONTAINING POP MARKED AND CERTIFIED INNER CONTAINERS, THE FOLLOWING MARKING SHALL BE PLACED ON THE CONTAINER IN LIEU OF THE POP MARKING: "INNER PACKAGES COMPLY WITH PRESCRIBED SPECIFICATIONS".

D. ANY OTHER SPECIAL MARKINGS:

I. ANY SPECIAL PRECAUTIONARY MARKINGS AND HAZARDOUS MATERIALS (HAZMAT) LABELS REQUIRED BY TITLE 49 CFR AND THE APPLICABLE INTERNATIONAL DOCUMENTS (SUCH AS ICAO TECHNICAL INSTRUCTIONS FOR THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR; IATA DANGEROUS GOODS REGULATIONS; AND THE IMDG CODE FOR WATER SHIPMENTS) FOR THE COMMODITY DESCRIBED BY THE PSN.

II. MARKINGS REQUIRED BY NATO AGREEMENTS SUCH AS THE NATO SYMBOL OF INTERCHANGEABILITY, NATO DESIGN MARK, AND NATO AMMUNITION AND PACK SYMBOLS. THESE SHOULD ONLY BE APPLIED AT THE DIRECTION OF THE PROCURING ORGANIZATION. THE APPROPRIATE NATO STANAG SHALL BE CONSULTED FOR SPECIFIC LOCATION IF NOT IN THE CONTRACT.

III. NET EXPLOSIVE WEIGHT MARKINGS (REQUIRED ONLY FOR COMMERCIAL AIR SHIPMENTS). EACH CONTAINER TO BE SHIPPED VIA COMMERCIAL AIR MUST HAVE THE NET EXPLOSIVE WEIGHT (IN POUNDS) CONTAINED IN THE PACKAGE MARKED UNDER THE GROSS WEIGHT MARKING. THE NET EXPLOSIVE WEIGHT MARKING SHALL BE PRECEDED BY THE LETTERS "NEW"

IV. NOSE END MARKING IS REQUIRED FOR ROCKET AMMUNITION (INCLUDING ROCKETS, ROCKET MOTORS AND JATO UNITS) AND WHITE PHOSPHORUS (WP) SMOKE ARTILLERY AMMUNITION. THE END OF THE CONTAINER CONTAINING THE ROCKET NOSE OR ARTILLERY FUZE MUST BE IDENTIFIED WITH THE MARKING "NOSE END". FOR RECTANGULAR BOXES, THE END OR SIDE EDGE OF BOX TOP MUST BE MARKED "NOSE END". MARKING MAY BE PLACED AT EITHER END OF BOX TO COINCIDE WITH AMMUNITION POSITION. FOR CYLINDRICAL CONTAINERS. THE CONTAINER BOTTOM OR CIRCUMFERENTIAL EDGE OVER AMMUNITION NOSE SHALL BE MARKED "NOSE END". UNLESS MARKING DRAWING ALLOWS OTHER OPTIONS IN ORIENTATION.

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V. DEPARTMENT OF TRANSPORTATION EXEMPTION NUMBERS (DOT-E NUMBERS) IF ASSIGNED TO A PACKAGED ITEM SHALL BE PLAINLY AND DURABLY MARKED "DOT-E" FOLLOWED BY THE SPECIFIC EXEMPTION NUMBER ASSIGNED. UNLESS OTHERWISE SPECIFIED, RECTANGULAR CONTAINERS SHALL HAVE THE "DOT-E" MARKING ON THE TOP ON A SEPARATE LINE FROM PSN/ID NUMBER MARKING. CYLINDRICAL CONTAINERS SHALL HAVE THE "DOT-E" MARKED LONGITUDINALLY IN AN AREA SEPARATE FROM OTHER MARKINGS.

VI. THERE ARE MANY OTHER SPECIAL MARKINGS THAT MAY BE REQUIRED TO BE MARKED ON THE PACKAGE THAT SHOULD BE PROVIDED IN THE CONTRACT OR DETAILED DRAWINGS. EXAMPLES INCLUDE SPECIAL ORIENTATION MARKINGS, TEMPERATURE LIMIT MARKINGS, CENTER OF BALANCE MARKINGS. UNLESS OTHERWISE SPECIFIED, THESE MARKINGS SHALL BE PLACED IN A CONSPICUOUS LOCATION ON THE IDENTIFICATION MARKED SIDE OF THE PACKAGE WHERE THEY WILL NOT INTERFERE WITH OTHER MARKINGS.

VII. SECURITY SEAL MARKING: SECURITY SEAL (WHEN REQUIRED) SHALL BE EMBOSSED AS DIRECTED ON DRAWING 8794342. ALPHA INITIALS OF LOAD PLANT, DEPOT, OR CONTRACTOR FROM MIL-HDBK-1461 AS APPLICABLE SHALL BE CLEARLY VISIBLE.

E. MARKING ON BOX ENDS OR CONTAINER RIMS.

I. BOTH ENDS OF RECTANGULAR EXTERIOR CONTAINERS SHALL BE MARKED WITH THE DODIC/NALC OF THE ITEM BEING PACKED AND THE APPROPRIATE LOT NUMBER. THE LOT NUMBER ON THE BOX ENDS SHALL NOT BE PRECEDED BY THE WORD "LOT" OR UNDERLINED. THE DODIC/NALC SHALL BE MARKED ON THE INSIDE RIM OF THE COVER END OF CYLINDRICAL CONTAINERS. THE LOT NUMBER SHALL NOT BE PRECEDED BY THE WORD LOT. (SEE FIGURE 1 & 2)

II. ALL NON-MANUFACTURED WOOD USED IN THE PACKAGING SHALL BE HEAT TREATED TO A CORE TEMPERATURE OF 56 DEGREES CELSIUS FOR A MINIMUM OF 30 MINUTES. THE BOX MANUFACTURER AND THE MANUFACTURER OF WOOD USED AS INNER PACKAGING SHALL BE AFFILIATED WITH AN INSPECTION AGENCY ACCREDITED BY THE AMERICAN LUMBER STANDARDS COMMITTEE. THE BOX MANUFACTURER AND THE MANUFACTURER OF WOOD USED AS INNER PACKAGING SHALL ENSURE TRACEABILITY TO THE ORIGINAL SOURCE OF HEAT TREATMENT. EACH BOX SHALL BE MARKED TO SHOW THE CONFORMANCE TO THE INTERNATIONAL PLANT PROTECTION CONVENTION STANDARD. BOXES AND ANY WOOD USED AS INNER PACKAGING MADE OF NON-MANUFACTURED WOOD SHALL BE HEAT TREATED. THE QUALITY MARK SHALL BE PLACED ON BOTH ENDS OF THE OUTER PACKAGING, BETWEEN THE END CLEATS OR END BATTENS.

F. LOT NUMBER: THE LOWERMOST MARKING ON THE PACKAGE SIDE CONTAINING THE ITEM NOMENCLATURE SHALL BE THE AMMUNITION LOT NUMBER. THE NUMBER SHALL BE PRECEDED WITH THE WORD "LOT" AND SHALL BE UNDERLINED WITH A SOLID LINE APPROXIMATELY 1/8 INCH THICK.

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G. SERIAL NUMBER(S). WHEN THE ITEM BEING PACKED HAS AN ASSIGNED SERIAL NUMBER, THE SERIAL NUMBER SHALL BE MARKED ON THE SIDE OF THE CONTAINER DIRECTLY ABOVE THE LOT NUMBER. THE SERIAL NUMBER SHALL BE PRECEDED BY THE LETTERS "SER". IF MULTIPLE SERIAL NUMBERS ARE PACKAGED IN THE SAME CONTAINER, ALL SERIAL NUMBERS MUST BE MARKED ON THE EXTERIOR CONTAINER.

MARKING FOR UNPACKAGED ITEMS:

1. ITEMS THAT ARE SHIPPED UNPACKAGED MUST BE MARKED WITH THE FOLLOWING INFORMATION:

- A. NSN/NATO STOCK NUMBER
- B. DODIC/NALC
- C. QUANTITY (UI)
- D. ITEM DESCRIPTION
- E. LOT NUMBER AND SERIAL NUMBER (IF ASSIGNED)
- F. PROPER SHIPPING NAME AND UN (NA) ID NUMBER
- G. ANY SPECIAL PRECAUTIONARY MARKINGS AND HAZMAT LABELS REQUIRED AS DETAILED UNDER EXTERIOR CONTAINER MARKING REQUIREMENTS.

OTHER MARKINGS:

1. EMPTY BOX MARKINGS: UNLESS OTHERWISE DIRECTED BY THE SHIPPING AUTHORITY, EMPTY CONTAINERS THAT ARE IDENTIFIED AS IF THEY CONTAINED AMMUNITION OR EXPLOSIVES SHALL HAVE THE IDENTIFICATION MARKINGS OBLITERATED PRIOR TO SHIPMENT OR SHALL HAVE "EMPTY" LABELS APPLIED TO THE PACKAGE.

2. LIGHT BOX MARKINGS: WHEN A PACKAGE CONTAINS LESS AMMUNITION OR EXPLOSIVES THAN THE PACKAGE IS DESIGNED TO CONTAIN OR WHEN AN EMPTY PACKAGE IS USED TO SQUARE A UNIT LOAD, THE BOX MUST BE SPECIALLY MARKED WITH LIGHT BOX MARKINGS AS FOLLOWS:

A. LESS THAN 3 CUBIC FEET: PAINT ENTIRE BOX (EXCEPT BOTTOM) ORANGE PRIOR TO MARKING THE CONTAINER FOR SHIPMENT OR BY MASKING EXISTING MARKING AND PAINTING ORANGE. THE WORDS "LIGHT BOX" SHALL BE STENCILED ON THE TOP AND IDENTIFICATION MARKED SIDE (OR ONE END IF NO ROOM) IN THE SAME COLOR AS THE REST OF THE MARKINGS. IF THE BOTTOM IS VISIBLE, THIS TOO MUST BE PAINTED ORANGE AND STENCILED WITH THE WORDS "LIGHT BOX". FOR CYLINDRICAL CONTAINERS, PAINT THE ENTIRE LENGTH AND BOTTOM OF THE CONTAINER ORANGE AND STENCIL AS INDICATED FOR BOXES.

B. GREATER THAN 3 CUBIC FEET: THE WORDS "LIGHT BOX" IN ORANGE INK SHALL BE MARKED ON THE TOP, SIDES, AND ENDS OF THE BOX. IF THE BOTTOM IS VISIBLE DURING SHIPMENT, THIS TOO SHALL BE MARKED. CYLINDRICAL CONTAINERS SHALL HAVE "LIGHT BOX" STENCILED ON TWO OPPOSITE SIDES OF THE CYLINDER AND THE NON-OPENING END.

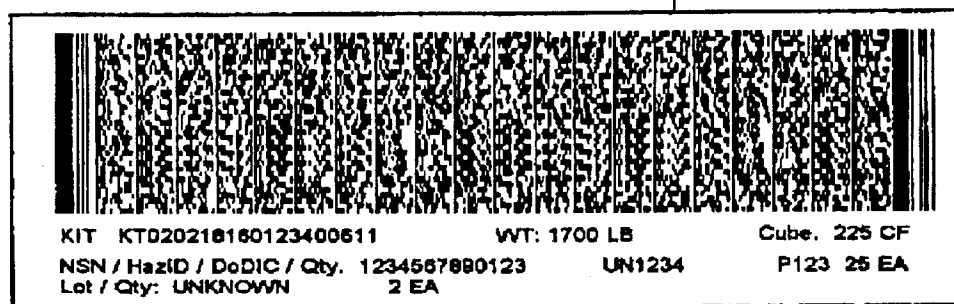
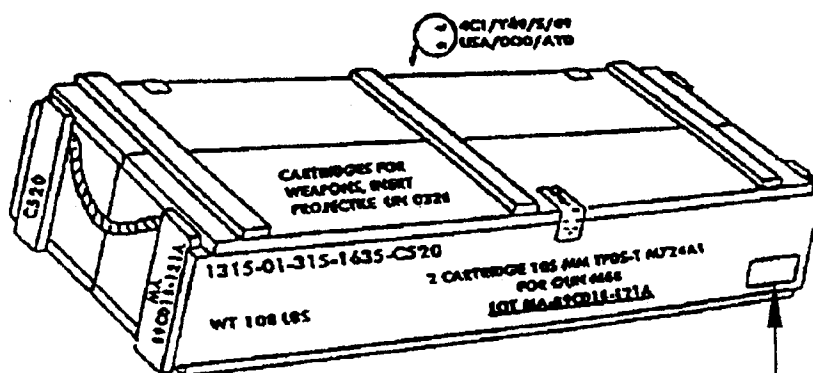
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C. EMPTY CONTAINERS IN UNITIZED AMMO LOADS: ANY EMPTY CONTAINER USED TO SQUARE A UNITIZED LOAD OF AMMUNITION SHALL BE PAINTED ENTIRELY ORANGE AND THE WORD "EMPTY" SHALL BE MARKED ON THE TOP, BOTH ENDS, AT LEAST ONE SIDE, AND THE BOTTOM IF VISIBLE. FOR CYLINDRICAL CONTAINERS, THE WORD "EMPTY" SHALL BE MARKED ON THE BOTTOM, OPPOSITE SIDES OF THE CYLINDER, AND THE COVER OR COVER LATCH. MARKING SHALL BE IN ANY CONTRASTING COLOR. FOR CONTAINERS MADE FROM NON-MANUFACTURED WOOD, THE HEAT TREAT QUALITY MARK SHALL BE MASKED PRIOR TO APPLYING ORANGE PAINT. THE HEAT TREAT QUALITY MARK SHALL REMAIN VISIBLE.

BAR CODE MARKINGS

1. IN ADDITION TO ALL OTHER MARKINGS, EVERY EXTERIOR SHIPPING CONTAINER SHALL HAVE BAR CODE LABELS OR MARKINGS APPLIED TO THE CONTAINER IAW DRAWING 12999545.

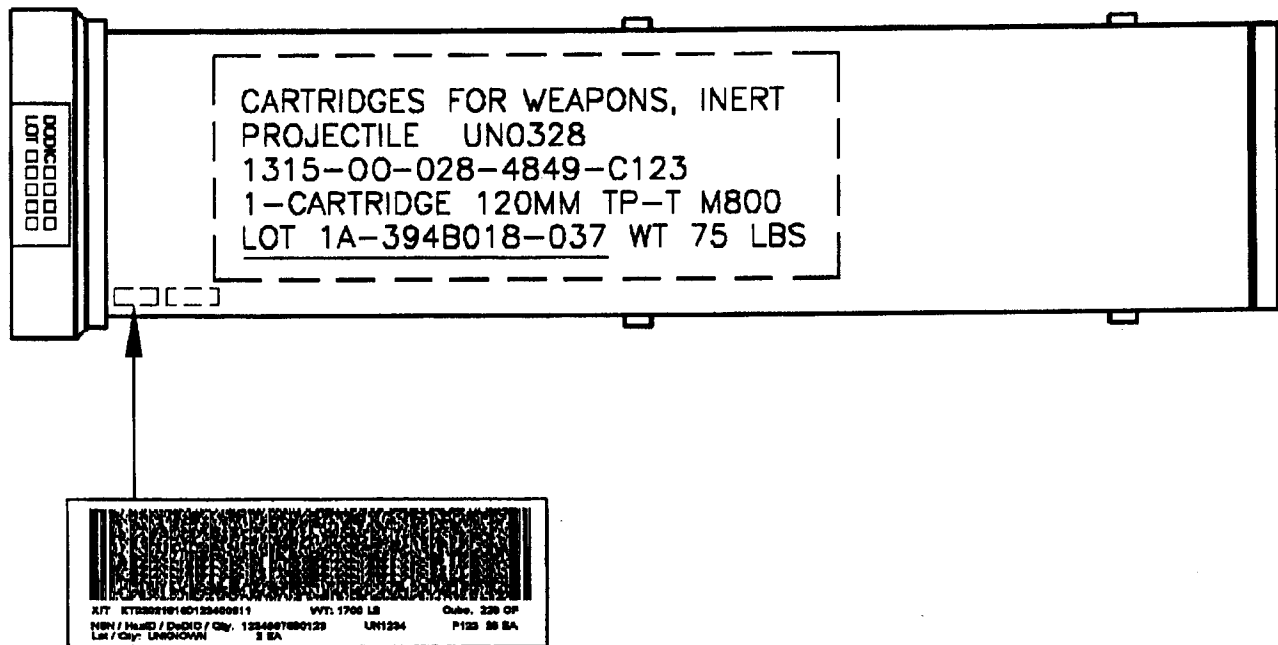
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IDENTIFICATION MARKINGS AND THE PLACEMENT OF BARCODE LABELS FOR EXTERIOR RECTANGULAR CONTAINERS.

FIGURE 1

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IDENTIFICATION MARKINGS AND THE PLACEMENT OF BARCODE LABELS FOR EXTERIOR CYLINDRICAL CONTAINERS.
FIGURE 2